

# The Mystic Seaport Bone Circle

In 1996 and 1997, Connecticut College and Mystic Seaport Museum conducted an archeological investigation of two 19th-century domestic houselots located on the museum's grounds. The Seaport, which is situated on the Mystic River off Long Island Sound, is an internationally-renown maritime heritage center. These structures and their associated landscapes are part of the museum's architectural collection and were scheduled for restoration and interpretation. The museum's staff was interested in an archeological perspective concerning changes that occurred to these domestic landscapes as they evolved from 1820 to the mid-1900s, when these structures were no longer privately occupied. A testing and excavation program with a strong public-oriented component that featured participation by Seaport staff and members of the local community was carried out over a period of two summers.

In the course of archeological excavations, a highly unusual bone assemblage was discovered at a depth of some 15 inches below the current lawn surface in the side yard of the George Greenman House, a Greek Revival structure built in 1839. George was one of three Greenman

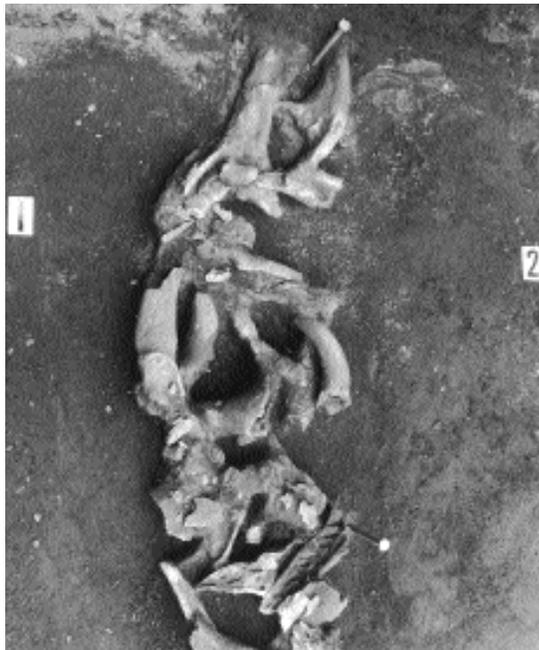
brothers who operated the historic shipbuilding yard on the grounds now occupied by the museum. The bones, predominately *Bos taurus* inner horn cores, were carefully excavated to reveal an almost circular configuration, situated beneath a rich organic soil horizon that contained late-19th-century domestic refuse, especially whiteware ceramics and assorted household materials such as nails, bottle glass, metal, and window glass.

Faunal analysis clearly indicates that the distribution of bone horn cores and associated cranial elements was a non-food-related assemblage. The majority of the bones were horns and cranial elements representing a single domestic species, *Bos taurus*. The deposit lacked evidence of fish bones, which were present at another trash midden associated with the property, and which would have been expected if the bone circle deposit represented a kitchen midden in light of the house's proximity to the Mystic River and Long Island Sound. The horn and cranial elements possess a low nutritional value and the deposit's archaeological context indicates its creation prior to the construction of the Greenman House. These circumstances indicate that care

Greenman Site  
bone deposit.



Detail of  
Greenman Site  
bone deposit.



should be taken to avoid a pro forma food-related interpretation for dense middens of domestic bones at seemingly obvious historic settings.

Since the refuse midden did not contain domestic food bones (these were located in a deposit at the rear of the house near the kitchen door) and dated to the period after the house was constructed, it was assumed that the bone assemblage pre-dated the house and resulted from earlier activities. Archeological evidence supporting this premise includes clay pipe stem fragments, dating from 1790-1810, which were unearthed beneath the bone deposit and the 19th-century artifacts, including a 1834 coin, located in strata above this distinctive feature.

The faunal deposit was an almost circular arrangement of *Bos taurus* osteological remains, specifically the discarded inner bone cores of mature cow horns. The total assemblage consisted of 1,182 discrete bones. In the 19th century, cow horn, specifically the outer keratinous layer, was used in several small New England industries as a raw material for the manufacturing of buttons, combs, and other commodities such as cups, ink wells, and needle cases.

Thus, we feel that the horn processing activity represented by the deposit is well bracketed chronologically to the first 30 years of the 19th century, a time before the Greenman house was constructed. The pre-1830s date further suggests an itinerant craft industry prior to the inception of button-making machines.

The deposit consisted of a circle of horn cores which possessed a diameter of 15.25 feet and a typical width of 2.5 feet. Osteological analysis of the bones included identification of species [*Bos taurus* (99.4%) and *Gallus gullus* (0.6%)], minimum number of individuals (intact horn cores represented, at a minimum, the butchering of 12 cows), determination of age at death (10 of 12 cows were mature adults), as well as evidence relating to butchering techniques, and the spatial arrangement of the bones. Of the *Bos taurus* remains, 98% of the bone fragments represent head and horn elements. Numerous bones exhibit cuts and other marks representing the use of knives, saws, and axes.

The reason for the circular pattern of the discarded horn cores remains difficult to understand, particularly in the absence of comparative material. As far as can be determined, the Mystic Seaport bone circle may be a unique deposit. Information from craftsmen who currently extract cow horn suggests that a circular pit could have been dug and the horns buried and composted with manure to encourage a chemical reaction that hastened the separation of the horn from the bone core. A second idea suggests that troughs for soaking cow horns in lye or similar caustic liquid were arranged in a circular pattern. When the horns were removed from the troughs and separated from the inner bone core, the bone core refuse may have been placed next to each trough as it was removed, thus replicating the circular pattern of the troughs. This latter explanation is partially supported by several spaces or breaks in the circle that may correspond to the position of the troughs.

While we continue to seek plausible explanations for the bone circle's unique configuration, it is clear that such research must include information from both archival and archeological sources. Such a comprehensive approach will hopefully enable us to better understand and interpret this unusual archeological feature as well as similar historic faunal assemblages that are unrelated to food consumption patterns.

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Photos by  
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